

Product datasheet for **RC213605**

Tryptophanyl tRNA synthetase (WARS) (NM_173701) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tryptophanyl tRNA synthetase (WARS) (NM_173701) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tryptophanyl tRNA synthetase
Synonyms:	GAMMA-2; HMN9; IFI53; IFP53; WARS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC213605 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCCAACAGTGAGCCGCATCTCTGCTGGAGCTGTTCAACAGCATCGCCACACAAGGGGAGCTCGTAA
 GGTCCCTCAAAGCGGAAATGCGTCAAAGGATGAAATTGATTCTGCAGTAAAGATGTTGGTGTATTAAA
 AATGAGCTACAAAGCTGCCGCGGGGAGGATTACAAGGCTGACTGTCTCCAGGGAACCCAGCACCTACC
 AGTAATCATGGCCAGATGCCACAGAAGCTGAAGAGGATTTTGTGGACCCATGGACAGTACAGACAAGCA
 GTGCAAAAGGCATAGACTACGATAAGCTCATTGTTTCGGTTTGAAGTAGTAAAATTGACAAAAGAGCTAAT
 AAACCGAATAGAGAGAGCCACCGGCCAAAGACCACCACTTCTGCGCAGAGGCATCTTCTTCACAC
 AGAGATATGAATCAGGTTCTTGATGCCTATGAAAATAAGAAGCCATTTTATCTGTACACGGGCCGGGGCC
 CCTCTTCTGAAGCAATGCATGTAGGTACCTCATTCCATTTATTTTACAAAAGTGGCTCCAGGATGTATT
 TAACGTGCCCTTGGTCATCCAGATGACGGATGACGAGAAGTATCTGTGGAAGGACCTGACCTGGACCAG
 GCCTATAGCTATGCTGTGGAGAATGCCAAGGACATCATCGCTGTGGCTTTGACATCAACAAGACTTTCA
 TATTCTCTGACCTGGACTACATGGGGATGAGCTCAGGTTTCTACAAAAATGTGGTGAAGATTCAAAAGCA
 TGTTACCTTCAACCAAGTAAAAGGCATTTTCGGCTTCACTGACAGCGACTGCATTGGGAAGATCAGTTTT
 CCTGCCATCCAGGCTGCTCCCTCCTCAGCAACTCATTCCACAGATCTTCCGAGACAGGACGGATATCC
 AGTGCCTTATCCCATGTGCCATTGACCAGGATCCTTACTTTAGAATGACAAGGGACGTCGCCCCCAGGAT
 CGGCTATCCTAAACCAGCCCTGCTGCACTCCACCTTCTCCAGCCCTGCAGGGCGCCAGACCAAAATG
 AGTGCCAGCGACCCCACTCCTCCATCTTCTCACCAGCACGGCAAGCAGATCAAAACCAAGGTCAATA
 AGCATGCGTTTTCTGGAGGGAGAGACACCATCGAGGAGCACAGGCAGTTTGGGGCAACTGTGATGTGGA
 CGTGTCTTTCATGTACCTGACCTTCTTCTCGAGGACGACGACAAGCTCGAGCAGATCAGGAAGGATTAC
 ACCAGCGGAGCCATGCTCACCAGTGTGAGCTCAAGAAGGCACTCATAGAGTTCTGCAGCCCTTGTGCGAG
 AGCACCAGGCCCGCGCAAGGAGGTCACGGATGAGATAGTAAAAGAGTTCATGACTCCCCGAAGCTGTC
 CTTGACTTTTTCAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC213605 protein sequence
 Red=Cloning site Green=Tags(s)

MPNSEPASLLELFNSIATQGELVRSKAGNASKDEIDSAVKMLVSLKMSYKAAAGEDYKADCPPGNPAPT
 SNHGPDATEAEEDFVDPWTVQTSSAKGIDYDKLIVRFGSSKIDKELINRIERATGQRPHHFLRRGIFFSH
 RDMNQVLDAYENKPFYLYTGRGPSSEAMHVGHLPFIFTKWLQDVFNVPLVIQMTDDEKYLWKDLTLDQ
 AYSYAVENAKDIIACGFDINKTFIFSDLDMGSSGFYKNVVKIQKHVTFNQVKGIFGFTSDCIGKISF
 PAIQAAPSFNSFPQIFRDRTDIQCLIPCAIDQDPYFRMTRDVAPRIGYPKALLHSTFFPALQGAQTKM
 SASDPNSSIFLTDATAKQIKTKVNKHAFSGGRDTEEHRQFGNCDVDVDFMYLTFLEDDDKLEQIRKDY
 TSGAMLTGELKKALIEVLQPLIAEHQARRKEVTDEIVKEFMPRKL SFD FQ

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6428_g07.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_173701

ORF Size: 1413 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_173701.2](#)

RefSeq Size: 2660 bp

RefSeq ORF: 1416 bp

Locus ID: 7453

UniProt ID: [P23381](#)

Cytogenetics: 14q32.2

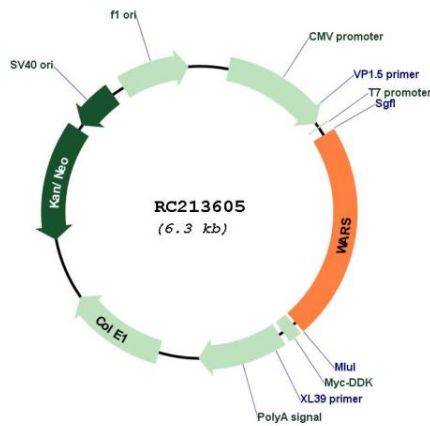
Protein Families: Druggable Genome

Protein Pathways: Aminoacyl-tRNA biosynthesis, Tryptophan metabolism

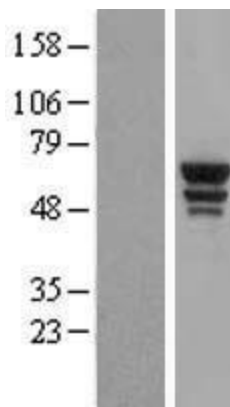
MW: 53.2 kDa

Gene Summary: Aminoacyl-tRNA synthetases catalyze the aminoacylation of tRNA by their cognate amino acid. Because of their central role in linking amino acids with nucleotide triplets contained in tRNAs, aminoacyl-tRNA synthetases are thought to be among the first proteins that appeared in evolution. Two forms of tryptophanyl-tRNA synthetase exist, a cytoplasmic form, named WARS, and a mitochondrial form, named WARS2. Tryptophanyl-tRNA synthetase (WARS) catalyzes the aminoacylation of tRNA(trp) with tryptophan and is induced by interferon. Tryptophanyl-tRNA synthetase belongs to the class I tRNA synthetase family. Four transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

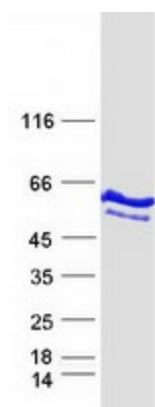
Product images:



Circular map for RC213605



Western blot validation of overexpression lysate (Cat# [LY406568]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213605 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified WARS protein (Cat# [TP313605]). The protein was produced from HEK293T cells transfected with WARS cDNA clone (Cat# RC213605) using MegaTran 2.0 (Cat# [TT210002]).